Include Erosion and Sediment Control in the Plan

A high percentage of the land remaining for future development in West Virginia has sloping soils that are very susceptible to erosion when disturbed by construction. Therefore, it is extremely important that a program for erosion and sediment control is worked out during the planning and design stages, before ideas become fixed and construction begins.

Special consideration should be given to the site and the landscaping of future developments. Proper street, lot, and building layout can minimize erosion during construction and complement the natural environment. Steep slopes, cut and fill slopes, and areas of highly erodible soils can be protected by conservation measures. Saving the natural vegetation, such as trees or shrubs, by minimum disturbance during grading can limit soil erosion. These are the kinds of considerations that need to be weighed and resolved during planning and design to get erosion control into the site development plan.

Where the cost of controlling erosion may be high because of site limitations, alternative land uses or a layout that is compatible with the landscape should be considered.

For example, in laying out a residential area on sloping land, fitting the buildings and streets to the natural characteristics of the land will help decrease erosion hazards and minimize development and maintenance costs. In using this method, houses are built only on the more level areas and the steep, more erodible land is left undisturbed.

The problems presented by small areas where erodible soils or steep slopes impose severe limitations may be solved best by using these areas as open spaces. Perhaps they can be added to public parks or to areas managed by community associations. In some places, schools make good use of them as nature areas or outdoor laboratories for class study.

There are alternative ways of effectively controlling erosion and sediment production on most sites. The final sediment control plan generally is based on such factors as the time of year that construction will take place, the extent of grading, the amount of cover on the land, and the builder's preferences. On most sites a combination of fitting the development to the land, limiting grading, limiting the time of bare soil exposure, and applying the appropriate erosion control practices will prove the most practical way to control erosion.

The following are some planning steps in controlling erosion and sediment:

1. Study the development area and evaluate soil characteristics, general topography, natural drainage, geology, and accessibility to determine site potential and identify site limitations.

2. Select a development plan that is compatible with site conditions.

3. Identify existing natural features that can be used in the development, such as vegetation, wildlife habitat, water areas, top soil available, etc.

4. Check with planning commission about local regulations that affect development of the area.

5. Prepare a plan for control of erosion and reduction of sediment during construction.

6. Plan construction so that certain areas may not be disturbed until they are needed.

7. Hold grading to a minimum and leave as many desirable trees as possible.

8. Provide for protection of areas disturbed that may be bare and exposed for long periods.

9. Control runoff by either diverting it off the site or conveying it safely through disturbed area. The structural measures considered include diversions, waterways, and closed drains.

10. Construct basins to store sediment and reduce surface runoff water during construction.

11. Provide for safe off site disposal of surface runoff water, including the increase resulting from development.

12. As soon as possible, establish perennial vegetation on areas where grading is finished.

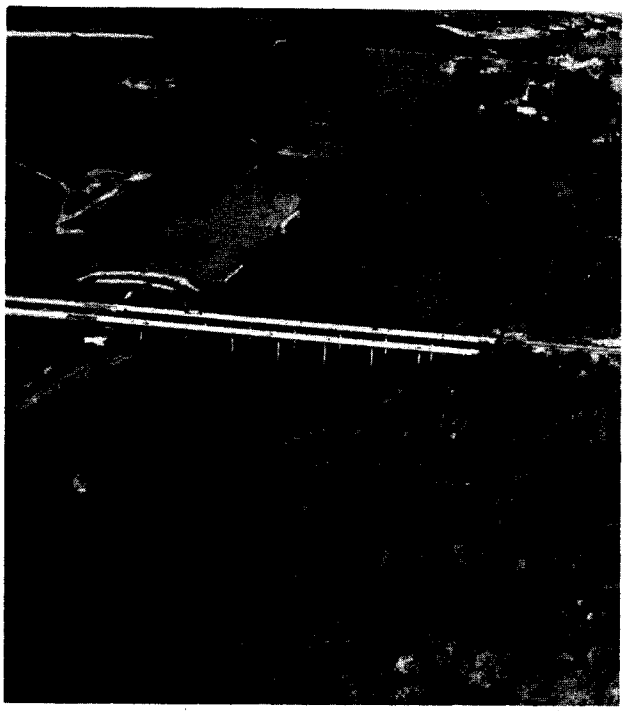
13. Provide for needed maintenance of conservation measures after construction is finished.

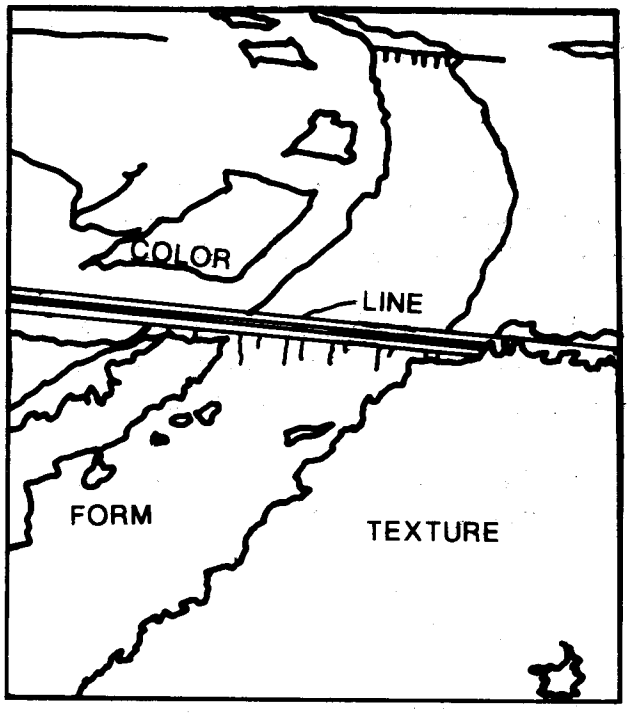
Landscape Resource

Landscape is a common sight to us all, although each of us has a different image. It is often influenced by the area where we live. People from the city probably picture a landscape as tall skyscrapers breaking the distant horizon line, whereas people from a rural situation may picture a landscape as a field with cattle grazing, a barn, and a pond. Although these two images are very different, their visual resource quality may be similar. The visual resource is the appearance of a landscape, and the visual resource quality is how appealing the landscape is to the observer.

Visual resource quality measures the aesthetic character of the landscape created by the combination of basic components such as line, form, texture, and color. The four basic components are represented by landforms, vegetation, water, and structures.

These basic components compete for visual dominance in the landscape and, in turn, influence the visual resource quality. Measuring visual resource is achieved by studying all the components and their effects on the total landscape. Visual resource planning is a very important part of the overall planning scheme. When introducing new elements or treating dis-





The elements for consideration in landscape architecture are form, lines, texture, and color.

turbed ones, the consequences of this work must be studied carefully. The objective of visual resource planning is to design, plan, and incorporate the components in a manner that will be aesthetically pleasing to the public.

Changes in a landscape create either positive or negative results, to various degrees, on the landscape.

Deterioration of the Reclaimed Landscape: Deterioration occurs when new elements are introduced and the effects are inadequately reclaimed. Little or no visual resource planning is the reason for this deterioration of the landscape.

Recession of the Landscape: Recession occurs when new elements are introduced and are inadequately incorporated into the landscape. Little or no visual resource planning is the reason for this recession of the landscape.

Destruction of the Landscape: Destruction occurs when the introduction of elements causes abrupt changes in the landscape. Damage is rapid and difficult to reverse.

Preservation of the Landscape: Preservation occurs when the elements of the existing landscape are incorporated into the proposed project. Minimal disturbance occurs, resulting from successful visual resource planning.

Enhancement of the Landscape: Enhancement of the landscape occurs when visual resource quality is improved with the introduction of the project. Enhancement is achieved with proper visual resource planning.

Modification of the Landscape: Modification occurs when the visual components created are unnaturally strong compared to the adjacent landscape. Treatment is needed to tone down the visual activity in an effort to create a landscape which

complements its surroundings. Modification is a case of visual resource planning which has not been totally successful.

During the planning process, questions like the following should be proposed to address potential problems and alternatives:

- What is the dominant element in the existing landscape?
- Where are the points of view of the proposed site?
- What are the adjacent land uses?
- Are there water features present on the site?
- Are there any structures on the site?
- How does the proposed project relate to the surrounding landforms, vegetation, water, and structures?
- What views will be created by the proposed project?
- What is the dominant element of the proposed project?
- What consequences will the proposed project have on the existing landscape?

Visual resource planning is an important part of the overall planning process. If proper attention is paid to visual resource planning, a more aesthetically pleasing visual resource will result, enhancing the image of the developer and increasing the quality of the final project. Visual resources should be preserved for future generations to enjoy.

Fitting the buildings and streets to the natural characteristics of the land helps decrease erosion and minimizes development and maintenance costs.